Soybean Digest

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Official Publication

OF

THE AMERICAN SOYBEAN ASSOCIATION

VOLUME 4 • NUMBER 12 OCTOBER • 1944

To keep you supplied with bags

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THERE are many angles to the job of keeping the soybean industry supplied with bags in these days of shortages. But we're working on all of them. Here's an example:

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No. 7 . . . of a Series . . .

An Open Letter *to the Cotton Textile Industry:*

☆ ☆ ☆

The United States is now the second largest soybean producing country in the world. In fact, it's probable that we have passed China and now top the list, but recent Chinese figures aren't available.

The total U. S. harvest in 1943 was 200 million bushels, of which nearly 150 million bushels were crushed and processed.

Moreover, the American soybean industry is almost an overnight wonder. Twenty years ago the harvest was less than 5 million bushels and the crushings almost nothing. As recently as ten years ago, the harvest was 14 million bushels, the crushings about 3 million.

The tremendous upswing of the soybean industry was well under way before the war started, but wartime has accelerated it still more. Fortunately, though, this business isn't a "war baby" that will subside when the shooting ends. Expert opinion is that for some years after the war, soybeans will have to answer a considerable part of the world's demand for oils, fats, oilcake and oilmeal. Then, as other food oils come back, increasing industrial usage of soybeans is expected here in America. If the impending industrialization of the "newer" countries, such as Brazil, Australia and Mexico materializes, the demand for soybeans may be almost limitless.

At any rate, the United States will be a soybean *exporting* country for years to come, during which time the domestic consumption seems certain to continue its climb.

What does that mean to the cotton textile business and to bag makers? It means both responsibility and opportunity.

It means responsibility because millions of yards of 40" 4.25 yd., 40" 3.75 yd. sheetings, and 40" 3.65 yd. osnaburg have already been used in 1944 by the soybean industry, and millions more will be needed to serve a hungry world and a restored American industrial system.

It means opportunity, because a major part of postwar soybean products may well be handled in bags, as it is now—and that represents a large and profitable volume for the years to come if cotton can get in solidly "on the ground floor."

That's a great combination—responsibility and opportunity—one which, we are sure, your industry and ours will team up to handle in winning style.

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This is a greatly reduced reproduction of the advertisement to the cotton textile industry, telling how cotton goods are required for bags for soybeans and soybean products. Copies will be sent you on request.

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Plainfield, Iowa
October 15, 1944

TO ALL MEMBERS OF THE
AMERICAN SOYBEAN ASSOCIATION:

It is going to be a distinct pleasure to me to serve the American Soybean Association as president during the coming year. I missed the fellowship and inspiration of the 25th Anniversary Convention, which I was unable to attend. However, I am sure that the first 25 years have been the hardest and that from now on the value of our organization will be appreciated by more and more people.

It is with a deep sense of responsibility and humility that I assume the duties as president of the American Soybean Association. Your suggestions and criticisms are solicited throughout the year, in order that the Association may continue to develop as the pioneer founding members intended. Only with your help and ideas can we hope to continue to build an organization that can be of real service to the industry. May I ask that as ideas and plans develop in your own mind you refer them to the office of the secretary, in order that we may build the next 25 years of soybean history soundly upon the foundations so well laid by the pioneer officers of the past?

The next meeting of the Board of Directors will be held during the first week in December.

One ever-present problem continues to confront us—that of adequate membership. The active paid membership of the Association still represents only a small fraction of the growers of soybeans. We must continue to build that membership far beyond its present figure before we can truthfully and adequately represent the soybean growers of the nation. We must do it NOW. If each member of the American Soybean Association will make himself personally responsible for securing at least one additional member before the December Board Meeting we will have made an excellent start. Will you make that contribution? And send one or more new memberships to the secretary? Your Board of Directors spend a large amount of their own time in your behalf. Will you do your part? Then act today — by forwarding one or more additional memberships to the office of the secretary. The price of $1.50 per year is less than the cost of 3 pecks of soybeans! ! !

Very truly yours,

HOWARD L. ROACH, President,
AMERICAN SOYBEAN ASSOCIATION.

HLR:jms

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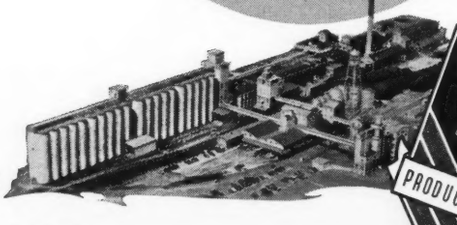
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THE *Soybean Digest*

GEO. M. STRAYER, Editor KENT PELLETT, Managing Editor

Publishers' Representatives: Ewing-Hutchinson Co., Chicago

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IN THIS ISSUE

	Page
Soys and Soil	6
Markets for Soy Flour	8
Nutritive Value of Soybeans	9
Capacity of Soybean Mills	11
Soybeans in Missouri	12
Grits and Flakes	16
October Crop Report	17
Washington Digest	19
Crops and Markets	21

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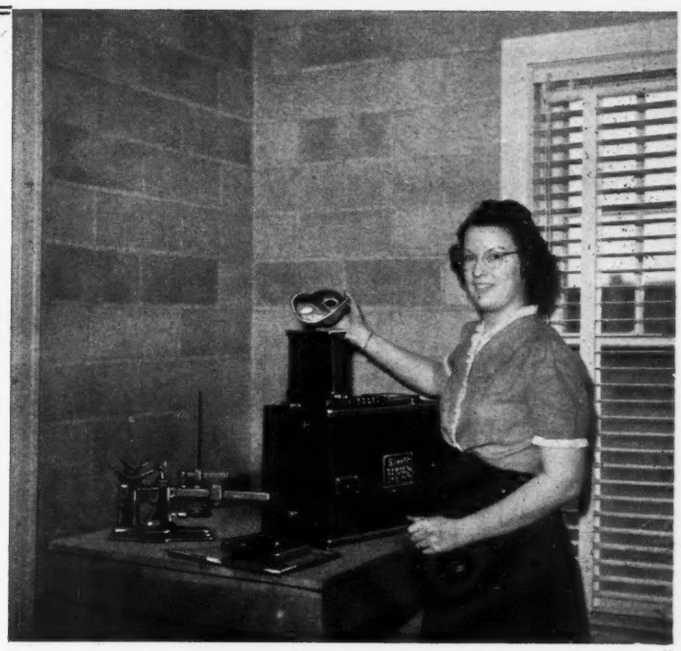

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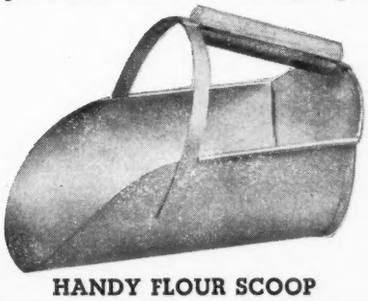

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SOYS and

(Material and photos U. S. Soil Conservation Service.)

Serious erosion occurs when soybeans are planted and cultivated in straight rows up and down the slope.

Sheet and gully erosion caused by excessive water runoff after soybeans have been harvested.

The acreage of soybeans harvested for beans has increased from nearly 4½ million acres in 1939 to approximately 11 million in 1944. To reach this acreage, much sloping land has been planted, and serious erosion has resulted. Unless conservation measures are employed, acre yields will drop.

The American Soybean Association is taking the lead in meeting the challenge of this situation. The 25th annual meeting recommended "that members give full consideration to best land use when planning their postwar agricultural production even though it may mean a modification of soybean acreage on soils subject to serious erosion."

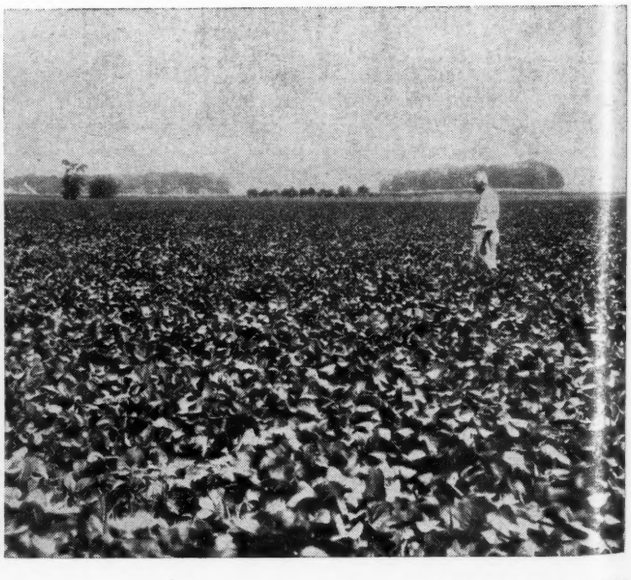
Special care should be taken to plant soybeans on land not subject to severe erosion or to plant where adequate conservation measures and practices can be used to control excessive soil and water losses. Land which has lost most of its topsoil should not be planted to soybeans. The yields will be disappointing, and gully erosion may be started. Soybean fields left unprotected after harvest are subject to severe erosion.

In Missouri in an 8-year experiment soybeans were grown in 42-inch rows and cultivated up and down the slope the first 4 years, and were grown in 8-inch rows (drilled solid) up and down the hill the next 4 years. The soybeans in wide rows lost more than twice as much soil as the beans drilled solid.

Although the rainfall averaged 44.07 inches in the first 4-year period and only 39.73 inches in the second period, this difference in precipitation had little effect on erosion, as judged by the soil and water losses from corn planted in 42-inch rows,

Combining soybeans on a terrace ridge. No evidence of erosion.

Soybeans drilled solid give greater protection to the soil. Erosion is greatly reduced. (Illinois Agricultural Experiment Station.)



the Soil

● *A. S. A. is already tackling a postwar problem that will demand the most serious attention of soybean growers, that of soybeans and soil conservation. Photos and material are from the U. S. Soil Conservation Service.*

also there was little difference in the losses of soil from beans in 42-inch rows and from corn in such rows.

In Iowa, in 1943, field trials of soybeans were conducted on 38 farms in 8 counties on 4 different soil types. Beans drilled and cultivated on the contour averaged 2.2 bushels per acre more than those planted up and down the hill in the same field. Increases of more than 5 bushels per acre were obtained in some fields. In 1942 in similar field trials the average increase in yield on contoured fields was 3.2 bushels per acre. Similar results have been obtained in Illinois, Missouri, and other states.

On long slopes and certain types of soil subject to serious erosion, terraces provide the additional protection necessary to stop excessive soil losses. Farmers can build them with a plow, at very little cost. If the soil is fertile, more intensive rotations can be used without danger of losing the topsoil.

If soybeans are to be grown on sloping land subject to erosion, they should replace corn, rather than follow corn, in the rotation. The soil conservation experiment station in Missouri reports soil losses of less than two tons per acre from soybeans following red clover in a rotation that does not include corn, as contrasted to nearly six tons from soybeans following corn in a rotation.

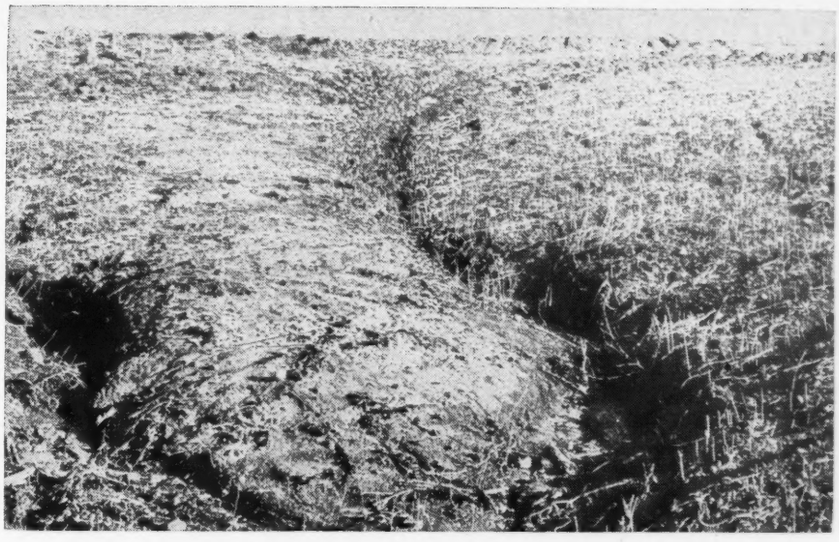
Where the land lies unprotected by sod or cover crops until planting time in the spring, erosion losses are greater than where soybeans are planted on sod or following a winter cover crop.

Soybean land should be protected from erosion after the crop is harvested. A winter grain crop should be sown between the bean rows before the pods are set or immediately behind the combine.

Our country needs more soybeans. Increase the yield by growing them on fertile soil that is well protected from erosion. Excessive soil and water losses can be prevented by using conservation practices, such as contour tillage, strip cropping, terracing, and sod or winter cover before the crop is planted and after it is harvested.

—s b d—

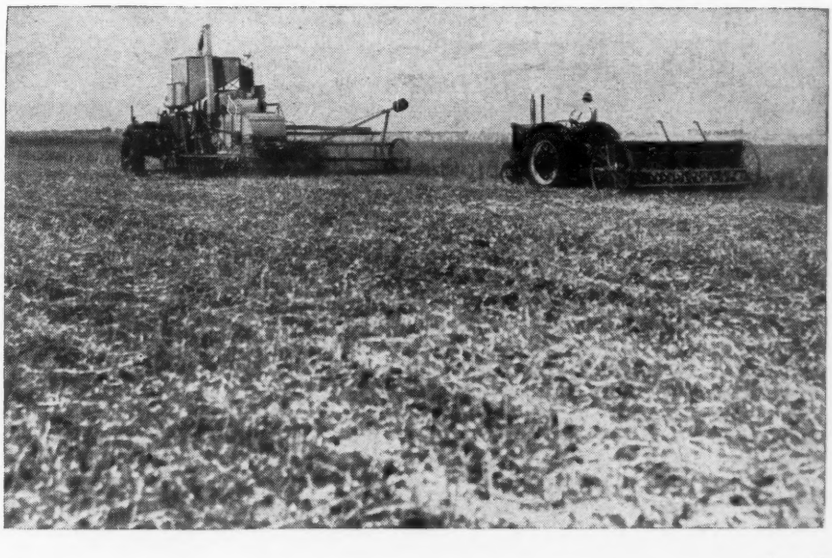
Dr. Manuel Gamio, Mexican anthropologist and director of the Inter-American Indian Institute, has recently been guest of the U. S. State Department at Washington. One of the projects of the Institute is to increase the protein intake of the Indian diet through the use of soybeans.



A close-up view of gully erosion in a soybean field where land is sloping and the topsoil is thin.

Plowing under a grass-legume sod for soybeans. The soil is protected by the plants until shortly before beans are drilled. The legumes provide nitrogen, and organic matter leaves the soil loose and in good tilth to absorb moisture.

Drilling winter wheat on soybean stubble immediately behind a combine harvesting soybeans. No seedbed preparation is necessary, the soybean straw is not a tillage obstacle, and the crop residue provides a protection to the surface of the soil. (Ill. Agric. Experiment Station.)



POSTWAR FOREIGN MARKETS

for Soy Flour

By JOHN PERRY
John Perry & Associates, Washington, D. C.

It is estimated that the soy flour industry can today produce about one billion pounds in excess of annual domestic consumption. Much of this extra capacity was set up, with official encouragement, in anticipation of post-war relief needs.

About the most encouraging thing that can be said today about overseas market prospects is that soy flour will be needed and can be used. Whether it will be used on a large enough scale to make use of all production facilities is quite another matter.

Various estimates have been made of Europe's relief needs, and several supply schedules have been projected. The original plan of the Tolley Committee called for extensive use of soy flour. Soy flour, and various products including soy flour and grits, were included in the plans of the Office of Foreign Relief & Rehabilitation Operations. These early plans have been discarded. No provision for soy in any form was made by the Inter-Allied Postwar Requirements Bureau, nor by the British Young-Sinclair working parties. Present UNRRA schedules include no soy products.

According to the *New York Times:* "The food program of UNRRA will concentrate on basic foods, such as bread grains, fats, meats, and milk products liked by all people when prepared according to their own cookery, says Andrew Cairns, chief of the Food Division . . . Except for some special situations, dehydrated soups and dried eggs are not the UNRRA type; canned pork and the sturdy old grain cereals are." In other words, UNRRA wants to supply Europe with the foods that Europe had before the war, and hesitates to experiment with anything new.

REALISTIC ESTIMATE

This is understandable. After World War I, there were reported instances of hungry people refusing to eat unfamiliar foods. Although nothing like an adequate report has come from Italy on the Italian reaction to dry soup, and although the Army is still distributing it, the impression has gotten around Washington that the soup was a failure. No official wants to risk sending into a relief area food that will not be used.

If the supply of animal protein were adequate, there might be little chance for soy flour. Some of the present indifference to soy can be attributed to the fact that few people have ever seen a reasonable estimate of European protein needs compared with a realistic estimate of how much milk, meat, fish, and cheese the United States will be willing and able to send to Europe in 1945. While much meat is off ration now and dairy production this year has been better than expected, the 1945 outlook is not encouraging. The one billion pounds of soy flour is the only large reserve of high-quality protein available anywhere in the world.

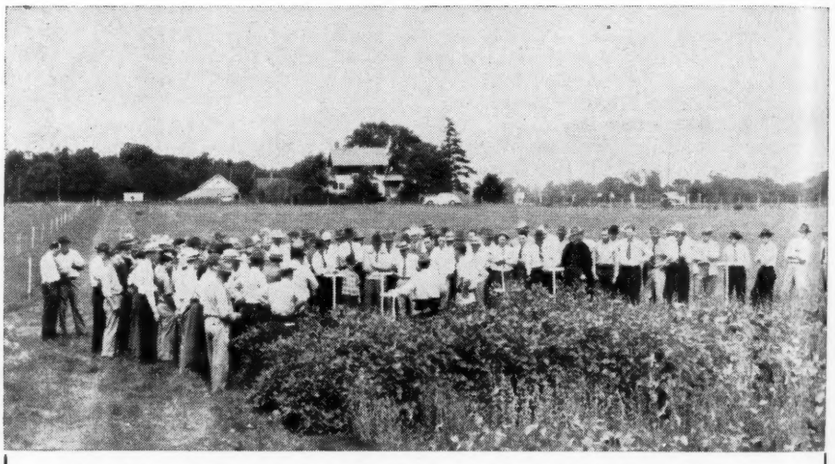
UNRRA will not decide what is to go to Europe. Actual requirements will originate with the government of each European area. These governments will say what they want and will decide what substitutes they will accept.

There is considerable interest in soy flour and soy products among the governments-in-exile. Many of them do not yet have food experts in Washington and few of them have any commodity specialists as yet. But individual foreign nutritionists, public health officials, and agricultural economists are familiar with soy and are promoting it within their own missions.

It is becoming increasingly important to bridge the gap between the soy industry and potential foreign users. Soy flour and products present unique problems of distribution. There is need to interpret our knowledge about soy and its uses in terms of the actual conditions of use in each European country.

There will be technical problems to solve. How can soy flour be used in combination with the kind of flour that is milled in Greece and Poland without trying to effect a change in traditional baking practices? Where in Europe is there a meat industry that might use grits? Can soy be used in the Mediterranean in noodles and spaghetti? What types of dry soups would be popular in each country?

The answers to some of these questions may be found only after Europe is liberated and we have more exact knowledge of conditions there. But if foreign officials recognize that soy protein is a satisfactory supplement to animal proteins, and if they are made aware of the versatility of soy, they will find it worthwhile to work with American technicians in finding ways to distribute soy and use it in foods their people will accept.



One of three groups at the Iowa State College Agronomy Field Day September 16. I. J. Johnson discusses the objectives of the soybean breeding program.

Agronomy Field Day at Ames

Visitors at Agronomy Field Day at Iowa State College, Ames, September 16, were taken on a conducted tour of the corn and soybean test plots. The groups were shown demonstration material consisting of about 40 varieties of soybeans grown throughout the Central region. Yield, lodging resistance, plant height, seed quality and desirable chemical characteristics were discussed.

Dr. H. D. Hughes, head of the Iowa State College Department of Agronomy, I. J. Johnson of the college agronomy staff, and R. R. Kalton of the U. S. D. A. Bureau of Plant Industry, conducted the soybean tour.

The new Lincoln soybean variety, seed for which was released only to certified growers this year, has been hybridized with Richland in an experiment at the Agronomy farm in an attempt to improve its lodging resistance.

Other hybridization work on soybeans involves crossing vegetable types with the field type to try to give the former the height and yield of the latter. No conclusive results have been obtained in this experiment to date.

Last year an experiment was begun in which hail damage was simulated in soybeans to test its effect on lodging, maturity and yield.

Variety yield test plots have been established at Kanawha, Cherokee, Cresco, Hudson and Ottumwa.

PROCESSORS MEET

The Iowa and Western Soybean Processors Association met at the Sheldon-Munn Hotel at Ames from 10 a. m. to 12 on the same day, holding a round-table discussion of the various problems confronting the processing industry.

H. N. Johnson, manager of the Ralston Purina Co.'s Iowa Falls, Iowa, processing plant, was in charge of the meeting. As the organization is rotating chairmen with a new one at each meeting, Mr. Johnson appointed Clark Cooley, Spencer Kellogg & Sons, Inc., Des Monies, as chairman of the next meeting.

After a noon luncheon the group took part in the Field Day at the college.

NUTRITIVE VALUE OF *Soybeans*

By GLADYS M. KINSMAN

● A thorough discussion of the food value of soybeans and their products. An address before the Silver Jubilee meeting of American Soybean Association. Dr. Kinsman is professor of nutrition at the University of Illinois.

THE SOYBEAN is only beginning to take its place in this pattern of supply and demand as it relates to food supply for the world and the physiological requirements of the people.

The nutritive value of the soybean and soya products is to be reviewed from the standpoint that these foods are recognized as specific entities in themselves and are not just substitutes for foods more familiar to the American public. One food need not be thought of as a substitute for another. Each food has its own value according to the contribution it can make in meeting the total nutritional requirements.

The very high content of good quality protein (30-50 percent) is the chief characteristic of the bean on which most of the recommendations are based for its use. The first obvious evidence that the human body can use the protein efficiently is the observation that for centuries the people of the Orient have depended largely on the protein of the bean to meet the protein requirement of the body. But at the present time a very scientifically minded time, the results of controlled experimentation must give indisputable evidence before the scientists are satisfied. Most of the controlled studies that give this evidence have been made on rats and other animals. In most cases the results have indicated that the protein of soybeans, properly processed, has a high nutritive value (3). These studies also give evidence that not all animals utilize the protein to the same degree of efficiency. This means that statements made on the value of the protein in human nutrition should be based on controlled experimentation with human subjects. In the few studies reported on human subjects (3) the results have varied but even with these variations the rating of the biological value would vary only from good to better to best. The variations reported, from 65 percent to 96 percent, are due probably to different methods of calculating the biological value. Even with animals, different procedures are used and with human subjects no uncomplicated procedure has yet been conceived.

HUMAN SUBJECTS

Last year, researches on the digestibility and the biological value of the proteins of soybeans and of soya flour were conducted with adult human subjects at the food and nutrition laboratories of the Department of Home Economics at the University of Illinois and at the animal nutrition laboratories of the Department of Animal Husbandry. The results of these studies have not been published so figures cannot be given here. The results obtained by two different procedures confirmed the general assumption that the human body does utilize efficiently the protein of the soybean.

The determination of the biological value as first defined requires an experimental period during which the subject receives no protein but does receive all the other food essentials. Most animals won't eat very much of such a diet, therefore small amounts of good protein have to be included in the ration to induce the animals to eat it. In experiments of this type, there is just one advantage in the use of human subjects over the use of animals. Human subjects will force themselves to eat a protein free diet, animals will not. The food is not unpleasant but the appetite is not sufficient to assure caloric balance unless special care is taken. An appreciation of the difficulty involved in conducting such studies comes with the realization that a protein-free diet permits the use of only pure fats, pure sugars or starches, mineral salts and synthetic vitamins. It is obvious that the accumulation of data on nutrition problems with human subjects is slow and expensive. But only by the use of human subjects can authentic information on human nutrition be obtained.

The values of the proteins of all varieties of beans studied have been found to be improved by heating. The immature bean and the freshly germinated bean are reported to contain protein superior in nutritive value to that of the raw mature bean. Heating improves the protein of the immature as well as that of the mature bean (14).

The possibility of supplementary reactions between proteins from different sources catches the imagination of the practical nutritionist. If the soya flour would increase the value of the protein of a grain flour in addition to retaining its own high value, a mixture of proteins of excellent quality could be made very easily. Soya flours are not suited to American food habits if used alone. The resulting products show no resemblance to foods already familiar to Occidental peoples. Soya flours will, no doubt, make their greatest contribution as one constituent in a mixture of flours.

Recent studies (15) with rats show good supplementary possibilities for soya flours with wheat flour. The addition of 5, 10 and 15 percent of soya flour to wheat flour increased the growth-promoting properties of the mixture to almost that of the soya flour alone. The utilization of mixtures of proteins by human beings is a question on which there is little information and one that should be studied extensively.

And this is the reason the study of the utilization of mixtures of proteins including that of the soybean is being continued here at the University of Illinois.

The soybean has the unusual advantage of being able to produce large quantities of both fats and protein. The mature bean contains from 13 to 25 percent of lipids.

The soybean has furnished more fat to the American diet in relation to the total fat consumption than it has protein in relation to the total protein consumption.

ARGUMENT ON FATS AND OILS

The relative nutritive values of various fats and oils in human nutrition is a pregnant question that may give birth to lively discussions of political, academic, scientific, or economic import. However, recent experiments with rats have removed some of the confusion, at least in the scientific realm.

Before reviewing these experiments, it may be well to mention two rather well established facts about edible fats:

1. All fats of vegetable and animal origin, with the exception of a few that have very high melting points, are almost completely digested and utilized by human beings. The coefficient of digestibility is about 95 percent. There are, therefore, no differences in the value of the oils of vegetables and animals due to differences in digestibility.

2. The unsaturated fatty acids, sometimes called the "essential fatty acids" because there is evidence that they are necessary for good health, are present in the vegetable oils. Only with more information on the human requirements for these unsaturated fatty acids will come better means of judging fats and oils from the standpoint of their content of these chemical compounds.

At left, Vegemeats, a soy product put out by the Loma Linda Co. May be served in the form of steaks, loaves, patties and roasts.

—Photo Pacific Coast Review

In 1940 a report from the University of Wisconsin laboratories stated that better growth was noted when butter was used in the rations than when corn oil was used. Later, in further research (19) at the same laboratories in which the sugar lactose, used in the first study, was replaced by other carbohydrates, sucrose, dextrose, starch and dextrin the superiority of butter disappeared. With diets such as man ordinarily consumes of mixed carbohydrates there is no evidence that vegetable fats are inferior to butter fat if only the fat is considered.

A recent series of experiments (20) (21) (22) (23) has investigated the value of various oils, including that of the soybean as demonstrated by 1. rate of growth of young rats, 2. the effect of flavor on food preference, 3. the composition of the body tissues, 4. fertility and lactation.

The results showed no differences in the rates of growth of rats given mineralized skimmed milk powder with vitamin supplements and with:

(a) butter
(b) corn oil
(c) cotton seed oil
(d) olive oil
(e) peanut oil, or
(f) soybean oil

It was also observed that the efficiencies of conversion of the various fats to body tissue were identical. No differences in the water, protein, fat, ash and calcium contents of the animals occurred except for a sex difference. A flavor preference was demonstrated. The rats preferred the vitamin fortified skim milk powder containing butter to those containing any one of the other oils.

The authors of these reports concluded that flavor may play an important role in the consumption of different diets all of which are satisfactory from a nutritional standpoint.

REQUIREMENTS FOR LACTATION

The dietary requirements necessary for lactation that will assure the growth of the offspring are more exacting than those for early growth or for pregnancy even. Diets satisfactory for growth and reproduction may be inadequate for lactation. In this series of experiments, pregnancy ensued in the female rats irrespective of whether the fat of their rations was butter, margarine, corn, cotton seed, olive, peanut or soybean oil. No differences attributable to the fat were found in the fertility of the male or female rats. Even in the severe test of promoting lactation, the fats were reported to be equally efficient as judged by the rates of growth of the offspring and their size at weaning.

To complete the discussion of the nutritive value of soybeans, mention should be made of the vitamin and mineral contents of the beans themselves and of the various products. In a 1944 monograph (1) this statement is made: "Most vitamin assays of vegetable oils, in general, indicate the presence of but little vitamin A or D." There are in the literature conflicting reports concerning the vitamin A content of various soya products but the evidence seems pretty well established that the oils contain no appreciable amount of the vitamins.

The beans themselves do contain at various stages of growth and maturity all of the well known vitamins with the possible exception of D, as would be expected. The vitamin C content of the sprouts has been highly lauded. (24) The green beans, which are well liked by many people, contain vitamins A (25) and C and the B vitamins (26).

The vitamin B contents of the edible beans have been reported in detail as follows (26):

The mature beans contain more thiamine, riboflavin, pyridoxine, biotin and pantothenic acid than does wheat, and less niacin than the wheat. Figures (27) accumulated from the literature show that the soybean contains an appreciable amount of nicotinic acid, appreciable, that is, when the content is compared with that of beef, pork, eggs, wheat and oatmeal.

Probably, at the present time, it is unsafe to give specific values for vitamin content of the various flours, flakes and grits until more analyses are made on these foods. Treatment during manufacture may alter the contents appreciably.

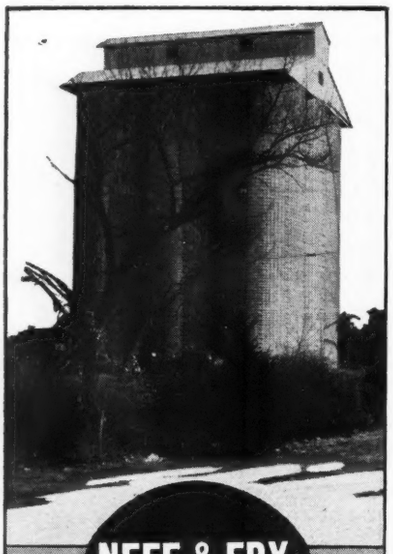
There is little information from controlled experimentation available on the utilization of the minerals of the soybean by human beings except in the case of infants. Soybean milk has provided minerals in the diet of young Orientals for centuries. In the United States, soybean milk is used only for the feeding of infants and other persons who are allergic to the usual food sources of minerals. Reports (3) state that infants grow normally with soybean milk as the main source of calcium, phosphorus and iron as well as of protein. Studies of the mineral contents of soybeans and soya products and the utilization of these by normal human subjects offer opportunities for the future.

To make a long story short, it can be said that the total nutritive value of the soybean is exceptionally high when it is judged on the protein, fat, vitamin, and mineral content and on the use made of these by the human body as far as is known at the present time.

Literature Cited.

(1) Markley, K. S. and Goss, W. H., Soybean Chemistry and Technology. Chemical Publishing Company, Inc., Brooklyn, N. Y., 1944.
(2) Soybean Nutritional Research Council. The Composition and Nutritive Properties of Soybeans and Soybean Oil Meal. A Literature Review. Chicago, Illinois, 1938, 1940.
(3) Jones, Breese D., Nutritive Value of Soybean and Peanut Proteins. Federation of American Societies for Experimental Biology. Proceedings 3:116, 1944 (June).
(4) Leaming, Betty G., Soya Products — Availability, Nutritional Values, and Utilization. J. Am. Diet. Assoc. 19:824, 1943 (December).
(5) Salmon, W. D. Soybeans for Human Food. Jr. Home Ec. 35:201, 1943 (April).
(6) Leaming, B. L. Soya Products Distribution Maps. J. Home Ec. 36:134, 1944 (March).
(7) War Food Administration. Handbook for State Goal Meetings. United States Department of Agriculture, Washington, D. C., 1943 (September).
(8) Hayward, J. W., Stenbock, H. and Bohstedt, G. The Effects of Heat as Used in the Extraction of Soybean Oil upon the Nutritive Value of the Protein of Soybean Oil Meal. J. Nutr. 11:219, 1936.
(9) Johnson, L. M., Parsons, H. T. and Steenbock, H. The Effect of Heat and Solvents on the Nutritive Value of Soybean Protein. J. Nutr. 18:423, 1939.
(10) Parsons, H. T. Effect of Different Cooking Methods on Soybean Proteins. J. Home Ec. 35:211, 1943.
(11) Stewart, R. A., Hensley, G. W., and Peters, F. N. The Nutritive Value of Protein. The Effect of Processing on Oat Protein. J. Nutr. 26:519, 1943 (Nov.).
(12) Fairbanks, B. W. and Mitchell, H. H. The Nutritive Value of Skim-milk Powders with Special Reference to the Sensitivity of Milk Proteins to Heat. J. Agr. Research. 51:1107, 1935.
(13) Morgan, A. F. and Kern, G. E. The Effect of Heat upon the Biological Value of Meat Protein. J. Nutr. 7:367, 1934.
(14) Everson, G. J., Steenbock, H., Cederquist, D. C., and Parsons, H. T. The Effect of Germination, the Stage of Maturity, and the Variety upon the Nutritive Value of Soybean Protein. J. Nutr. 27:225, 1944 (March).
(15) Jones, Breese D. and Divine, J. P. The Protein Nutritional Value of Soybean, Peanut, and Cotton Seed Flours and Their Value as Supplements to Wheat Flour. J. Nutr. 28:41, 1944 (July).
(16) Bureau of Agricultural Economics. The Feed Situation. United States Department of Agriculture, Washington, D. C.
(17) Simerl, L. H. The Competitive Position of Soybean Products: Soybean Oil and Soybean Meal. Master's Thesis, Department of Agricultural Economics, University of Illinois, 1939.
(18) Bureau of Agricultural Economics, Washington, D. C. The Fats and Oils Situation. FOS—86 1944 (April).
(19) Boutwell, R. K., Geyer, R. P., Elvehjem, C. A., and Hart, E. B. Further Studies

(Continued on page 15)



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SOYBEAN MILLS

Their Capacity and Ownership

By EDWARD G. SCHIFFMAN

Senior Agricultural Economist, Farm Credit Administration, Washington, D. C.

There is a wide variation in the annual capacity of soybean mills as the smallest processes less than 100,000 bushels and the largest in excess of 10 million. Of the 137 mills which were in operation, under construction, or for which priorities had been approved prior to July 1, 1944, 17 or approximately 11 percent had an estimated annual processing capacity in excess of 2 million bushels. These mills accounted for 48 percent of the total processing capacity (table). The 36 mills with less than one-half million bushels capacity accounted for approximately 25 percent of the total number but only 5 percent of the capacity of all mills.

The ownership of soybean mills is widely distributed as 99 of the 137 mills are owned by individuals or concerns having only one mill. The two processors having the largest number of mills had five each; three had four mills each; four had three; and two each had two mills.

While the number of mills owned by any single processor is relatively small the capacity owned is comparatively large. The seven largest processors with only 6 percent of the total number of mills had an annual capacity of approximately 81 million bushels or 47 percent of the total of 172 million. Four of these processors who each owned in excess of 5 percent of the capacity of all mills had 35 percent of the total. Fifteen other processors each owned from 1 to 5 percent. The remaining concerns each had a capacity representing less than 1 percent of the total.

From the above it is apparent that there is a small group of processors who own a relatively large percentage of the total processing capacity and a large number of small processors whose combined capacities represent only a small proportion of the total. Add to this condition of concentrated ownership the difference in efficiency of the various types and sizes of mills, differences in financial reserves, variations in freight rates, the concentration of processing capacity at certain locations, and a reduction in the quantity of beans available for crushing and a very complicated competitive situation can easily be seen for the postwar period. Under these circumstances severe economic shock can be expected by individual operators in the industry once government-established processing margins are abandoned. A realization of the dangers involved and careful planning now should lessen the casualties or at least reduce their severity.

NUMBER OF SOYBEAN MILLS, BY SIZE, JULY 1, 1944[1]

Annual Capacity[2] (1,000 bu.)	Number of Mills	Percent of Total	Total Capacity[2] (1,000 bu.)	Percent of Total
Less than 250	12	8.0	1,640	1.0
250 - 500	24	17.5	7,118	4.1
500 - 750	37	27.0	21,646	12.6
750 - 1,000	16	11.7	13,868	8.1
1,000 - 1,500	20	14.6	25,371	14.7
1,500 - 2,000	11	8.0	19,448	11.3
2,000 - 2,500	3	2.2	6,940	4.0
2,500 - 3,000	2	2.2	5,504	3.2
3,000 - 3,500	5	3.7	16.343	9.5
3,500 and over	7	5.1	54,355	31.5
Total	137	100.0	172,233	100.0

[1]Includes mills in operation, under construction, and those for which priorities had been approved prior to July 1, 1944. Mills in Southern States and on the West Coast some of which have crushed soybeans are not included.
[2]Based on 346 days of operation.

A. S. A. TREASURER IS HONORED

Chicago, Ill.—J. B. Edmondson, owner of the Wampus Farm, Clayton, Ind., and treasurer of the American Soybean Association, is one of a select group of farmers who have been honored by Allied Mills, Inc., for service in the production of Food for Victory.

Mr. Edmondson participated in the special broadcast "Victory Farmers" heard over a number of leading stations October 12, when he was interviewed.

Mr. Edmondson is one of the real pioneers in the soybean growing industry having raised them every year since 1914, and he has been instrumental in much of the progress achieved. He has been a member of the Soybean Association almost from its inception and has been one of the officers for nearly 10 years.

Swift's Soybean Oil Meal makes a high-quality base for the improvement of all your livestock and poultry feeds. Rich in protein, this palatable meal adds several nutritionally important ingredients to balance the analysis of your feeds.

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Mills at: Champaign, Illinois Cairo, Illinois
Des Moines, Iowa Fostoria, Ohio Blytheville, Arkansas

ALEX SINAIKO IS DEAD AT 82

Alex Sinaiko, well known Wisconsin flour and feed jobber, and for many years connected with the soybean processing industry, died at Madison, Wis., September 9th, after an illness of several months. He was 82.

Mr. Sinaiko came to this country from Russia in 1904 with his wife Rachel and family of four sons and four daughters, locating at Madison where he started in the grain and feed business. His keen intellect, inherent love of people and magnetic personality brought him business success and a host of friends everywhere throughout the Midwest.

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The Duplex Mill and Mfg. Co.
Springfield, Ohio

Soybeans in Audrain County, Mo.

Audrain County, Mo., in the northeast part of the state, now grows a more concentrated acreage of soybeans than any other area except the southeast section.

A recent tour of Audrain County soybean fields was arranged by County Agent John McClure to observe practices that would increase yields.

The feature of the tour was the 110 acres of fine beans grown by Frank Brakel, Laddonia, who is cooperating with the extension service with fertilizer demonstrations. Because the beans were so late, differences in the various fertilizers could scarcely be noted at the time of the tour. Later, actual yields will be recorded.

Mr. Brakel is one of the pioneer growers of soybeans for grain in northeast Missouri. As recently as 5 years ago this crop was unimportant but now brings Audrain county farmers alone about a million dollars a year.

Maucoupin and Chief varieties seem to be the favorites in Audrain county, with Boone coming in third.

One of the biggest surprises of the day came at an afternoon stop on the newly acquired farm of Carver Brown, near Laddonia. Here a fine field of beans, planted in rows, had absolutely no cultivation all summer, yet was unusually free of weeds. Two factors entered here. The ground was in lespedeza sod in 1943, and the dry weather had prevented weeds from starting.

At top of page, a view of part of the 110 acres of fine soybeans grown on the Brakel farm, which have in the past yielded almost 30 bushels per acre. Below, Arnold Klemme, extension soils specialist, left, and Mr. Brakel study effect of fertilizers on soybeans.

—Photos Missouri Ruralist

CONCERNING TERMINOLOGY

Editor *Soybean Digest:*

In the July 1944 issue of *Soybean Digest* we have noted on page 7 the reference to terminology in connection with various flours.

We are concerned over the fact that two different types of flour are referred to as "Low Fat Soy Flour" and we wonder whether this is intentional. It seems unfortunate that the flours with 4 to 8 percent fat and those with less than 1 percent fat are both referred to in this way. We have much preferred the practice of referring to the flour with less than 1 percent fat as the minimum fat type.

We should greatly appreciate having further information in this connection.

JEAN I. SIMPSON,
Associate Professor of Home Economics, University of Illinois.

EDITOR'S NOTE—Dr. Simpson refers to the article on soybean terminology by Managing Editor Kent Pellett in the July issue. In a subsequent letter Dr. Simpson says, "I do believe it is unfortunate to refer to any two types of soy flour by the same name." The editors invite further comment.

—s b d—

STALEY PLANT

Work has been begun on the construction of a million dollar solvent soybean processing plant at the A. E. Staley Mfg. Co., Decatur, Ill., it is announced.

It is believed that the processing facilities, with a daily capacity of 500 tons of soybeans, will be the largest solvent processing unit in the country.

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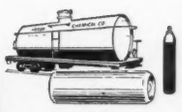

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★ FEEDING ★

Oil Meal For Poultry

From the standpoint of quantity, protein is the most important nutrient to be added to farm feeds for poultry rations, Dr. H. J. Sloan, professor of poultry husbandry of the University of Minnesota, told the annual feed school of the Western Grain and Feed Association and the Feed Institute of Iowa at Des Moines September 25.

One of the changes that the war has brought about has been an increase in the use of vegetable protein supplements, especially soybean oil meal. We now know as a result of this experience that at least reasonably satisfactory rations can be made without the use of any animal protein supplements. While some of the vegetable supplements such as cottonseed, linseed, and peanut meal do not contain as high quality protein, properly processed soybean oil meal is a good quality protein supplement and in some cases is as good as meat scrap. Its relative economy will probably mean considerably more use after the war than before.

When supplies become more available fish meal and meat scrap will again be used somewhat more than they are at present, but will probably not become as important in the ration as they have been in the past. Fish meal will probably be used somewhat more if available because of the way in which it supplements soybean oil meal. Milk will probably be discontinued nearly entirely as a protein supplement because of its relative cost and the fact that there will probably be very little available for animal feeding because of an increased use for human consumption.

The important adjustments that have been necessary in the use of high vegetable protein rations have been the addition of minerals and some vitamins. Calcium and phosphorus particularly are low in vegetable supplements and need to be added to most rations where very little animal protein supplement such as meat scrap and fish meal are used. The vitamin particularly found lacking is riboflavin and this will be another reason for the use of some meat scrap and fish meal. With relatively small amounts of fish meal, meat scrap and some vitamin supplements now available, milk will not be necessary in poultry rations.

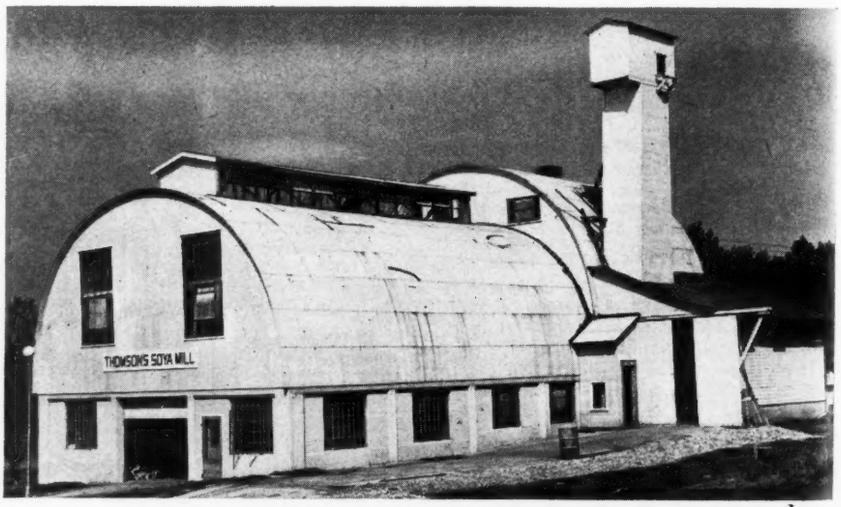
Proteins in Combination

An example of amino acid supplementation was reported by H. J. Almquist of the University of California before the annual California Hay, Grain & Feed Dealers convention. He reported use of a combination of soybean and sesame meal.

Proteins of the latter are very little known as to amino acid content. We found by analysis an unusually high content of methionine and an adequate tryptophane content. When fed as the only protein, sesame meal failed, however, to permit anything but poor chick growth. The difficulty was quickly identified as a deficiency of lysine, only about half enough being present.

"On the other hand, soybean meal has a surplus of lysine and a deficiency of methionine. The combination of these two meals in a ratio of 2 soybean meal to 1 sesame meal proved to be an ideal source of protein for the chick. Practically, this would mean that a feed mixer who has both of these meals on hand should use them together, rather than as substitutes for each other."

The War Production Board and War Food Administration have authorized Honeymead Products Co., Cedar Rapids, Iowa, to construct a soybean plant at Jefferson, Iowa, it has been announced.



Governor Opens Soya Mill

Governor Andrew F. Schoeppel of Kansas spoke at the formal dedication of the Thomson Soya Mill at Hiawatha, Kansas, September 26, and indicated his belief that Kansas is on the threshold of untold development of farm products through chemurgic processes.

"We wouldn't be worrying about postwar depressions or relief rolls in Kansas if every community had something like this. We must learn to utilize what we have at our own back doors, rather than looking with envy toward other sections of the country," said Governor Schoeppel.

The plant employs the solvent extraction process with trichloretholin developed by Iowa State College, and has a capacity of 20 tons per day. Owned by J. J. Thomson and his son, Glenn, it is under the foremanship of Charles E. Nelson.

The plant used material to comply with WPB requests. Parts came from old grist mills, refineries, old lead smelters, cereal mills and coal mines. The building is reinforced concrete with a half circular roof to further conserve materials.

THE SOY FOAM ARTICLE

Editor *Soybean Digest:*

I am sending you this note in regard to the article entitled "Soy Saves Ships" as it appears on page 8 of the July *Soybean Digest*, which refers to a fire-fighting compound made on a "soybean oil meal base," and which is also referred to as "a secret combination of soybean oil meal and certain oxygen-free acids, etc."

Having no doubt that the author of the article, as well as *The Soybean Digest*, was not familiar with the facts in connection with this matter, I want to call your attention to the fact that this foam compound is not a combination of soybean oil meal, nor is it manufactured from soybean oil meal, nor could it be manufactured from soybean oil meal so far as any present knowledge goes. In view of this, the statements made in the article in reference to soybean oil meal are in error.

The only material used in the manufacture of this foam compound that is related to soybeans is Alpha Protein, the pure isolated protein of the soybean, as manufactured by our company in Chicago. The manufacturers of the fire foam compound, who are not mentioned by name in the article, will be the first to advise that their foam compound cannot be produced from soybean oil meal and, on the contrary, can only be produced according to their present state of knowledge, from Alpha Protein, insofar as soybean proteins are concerned.

Alpha Protein is quite a different material from soybean oil meal and is dissimilar chemically to the protein in soybean oil meal, although it is a product derived originally from the protein of soybeans. It is the result of many years of research and heavy manufacturing investment on the part of The Glidden Co. who are the only large-scale producers of isolated soya protein.

Our company takes a great deal of pride in having been able, through our extensive pioneer work in this field, to perfect the manufacture of this product in commercial quantities, thus having made through the manufacture of the foam equipment, this important contribution to the war effort for the United States Navy.

It is only reasonable and fair, we think, that the essential part that Alpha Protein has played in this development should be acknowledged and thus receive the recognition it deserves.

P. E. SPRAGUE,
Vice President, The Glidden Co.,
Cleveland, Ohio.

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We invite the readers of THE SOYBEAN DIGEST to use "MARKET STREET" for their classified advertising. If you have processing machinery, laboratory equipment, soybean seed, or other items of interest to the industry, advertise them here.

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KINSMAN

(Continued from page 10)

on the Comparative Value of Butter Fat, Vegetable Oils, and Oleomargarines. J. Nutr. 26:601, 1943 (December).

(20) Deuel, H. J. Jr., Movitt, E., Hallman, L. F. and Mattson, F. Studies of the Comparative Nutritive Value of Fats. I. Growth Rate and Efficiency of Conversion of Various Diets to Tissue. J. Nutr. 27:107, 1944 (January).

(21) Deuel, H. J. Jr., and Movitt, E. Studies of the Comparative Nutritive Value of Fats. III The Effect of Flavor on Food Preference. J. Nutr. 27:339, 1944 (April).

(22) Deuel, H. J. Jr., Hallman, L. F., Movitt, E., Mattson, F. H., and Wu, E. Studies of the Comparative Nutritive Value of Fats. II. The Comparative Composition of Rats Fed Different Diets. J. Nutr. 27:335, 1944 (April).

(23) Deuel, H. J. Jr., Movitt, E. and Hallman, L. F. Studies of the Comparative Nutritive Value of Fats. IV. The Negative Effect of Different Fats on Fertility and Lactation in the Rat. J. Nutr. 27:509, 1944 (June).

(24) French, C. E., Berryman, G. H., Goorley, I. T., Harper, H. A., Harkness, D. M. and Thacker, E. J. The Production of Vitamins in Germinated Peas, Soybeans, and Other Beans. J. Nutr. 28:63, 1944 (July).

(25) Sherman, W. C. and Salmon, W. D. Carotene Content of Different Varieties of Green and Mature Soybeans and Cowpeas. Food Res. 4:371, 1939.

(26) Burkholder, P. R. Vitamins in Edible Soybeans. Science 98:188, 1943 (August).

(27) McVicar, R. W. and Berryman, G. H. Nicotinic Acid in Foods. J. Nutr. 24:235, 1942.

—sbd—

Austen S. Cargill, Minneapolis, Minn., has been elected executive vice president of Cargill, Inc., according to an announcement by J. H. MacMillan, Jr., president of the firm. Mr. Cargill is a son of W. W. Cargill, founder of the Cargill Co.

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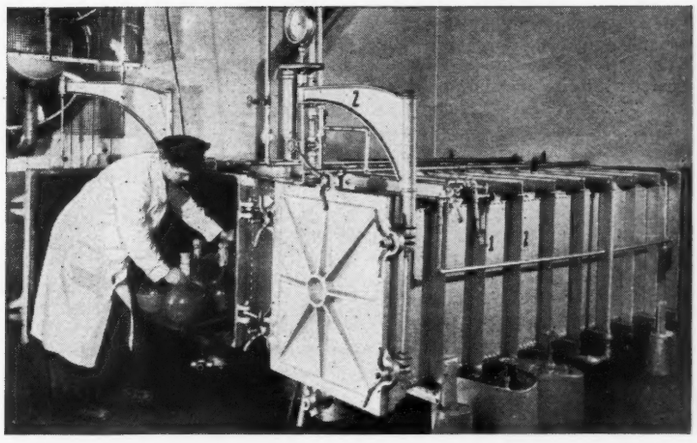

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★ GRITS AND FLAKES ★

FROM THE INDUSTRY

Harry A. Bullis, president of the General Mills Flour Mills Co., has announced that the company's research program has led to entry into the polymide resin or adhesive field; and that the resins, now being manufactured by the company on a small scale, are used as heat sealing adhesives in food packing, and in such products as package labels, spirit lacquers, printing inks, gaskets, can sealing compounds and many others. "Though on the surface this may appear a distinct departure from the company's primary job of processing agricultural products, it is in fact a by-product development in the use of soybean oil, and this is in line with the General Mills policy of fuller utilization of agricultural commodities and establishment of more markets for farm products," Mr. Bullis said.

Preparations are under way for an advertising campaign to broaden acceptance of the Vegemeats line, made of soybeans and select grains, among consumers and the promotion, on a more intensive scale than any of its predecessors, will soon get under way, the Loma Linda Food Co. announced last month. Vegemeats were first introduced to consumers at the Golden Gate International Exposition, and aroused immediate interest among the public and the trade. Following years of product improvement and building distribution in the western states, the Loma Linda firm now offers a complete line of Vegemeats, including "steaks" and "burger," as well as Vegemeats for loaves, roasts, and spreads.

Quantity recipes using soy flour are given in two new booklets published by the A. E. Staley Mfg. Co., Decatur, Ill. One deals with bakery formulas, the other with recipes for use in restaurants, hotels and institutions. The baking formulary contains 27 tested formulas for yeast breads, quick breads, sweet doughs, pies, cakes, icings, cookies and doughnuts. The other book contains a broad selection of quantity recipes for hotels and restaurants, with a special section devoted to foods for hospitals and institutions. In this section each recipe is accompanied by a food analysis, giving the value per serving in proteins, calories, and principal vitamins. This book will be furnished free on written request.

The Midwest Fats and Oils Club held its annual mid-summer golf party August 25 at Sunset Ridge Country Club, Chicago. The feature of the day was the annual competition for the Ernest Kissling Memorial Trophy, won this year by W. R. English, retired from Cudahy Packing Co., with a low net of 67. Low gross went to Marvin Wood, of Marwood Co., with an 82. The usual fun and frolic preceded and followed the dinner meeting, presided over by Carl H. Smith, of Roesling Monroe.

Victory Mills, Ltd., a subsidiary of Canadian Breweries, Ltd., at Toronto, Ont., has built at the behest of the Dominion government a 2 million dollar processing plant with an annual capacity of 3 million bushels on the waterfront at Toronto. The undertaking is primarily to relieve Canada's acute vegetable oil and protein feeds shortage. Soybeans and other oilbearing seeds as well as brewers' grains will be processed. Both the expeller and solvent processes will be used.

Walter E. Flumerfelt has been named vice president of the Vegetable Oil and Protein Division of General Mills., Inc., and Carter E. May will serve as division comptroller, Harry A. Bullis, president of the company, has announced. Mr. Flumerfelt will continue to manage the division's operations at Belmond, Iowa, as for the past year. Mr. May's headquarters will be at the executive offices in Minneapolis.

One of the most unusual uses developed for soybean meal and cottonseed meal was disclosed recently in the fisheries field, reports *Transactions of the American Fisheries Society*. The meals can be added to fish ponds to stimulate the production of fish. Productivity can be still further increased if superphosphate is added to these meals before they are introduced into the ponds.

George H. Kyser has been appointed chief chemist at General Mills' soybean processing plant at Belmond, Iowa, it is announced by Harry A. Bullis. Mr. Kyser will be responsible for chemical control of raw materials and finished products for General Mills' Vegetable Oil and Protein Division at the Belmond, Iowa, plant, which is expected to start processing soybeans in October.

H. R. Albrecht, who as plant breeder in the department of agronomy and soils at Alabama Polytechnic Institute, has been doing research work on soybeans, has accepted a position in the agronomy department at Purdue University, where his work will be with wheat and pasture and forage. He succeeds Dr. Wallace Worzella, who is now the head of the agronomy department at North Dakota State College.

Two appointments in the Vegetable Oil and Protein Division of General Mills, Inc., were announced recently by Harry A. Bullis, President. Bruce P. Neil has been appointed production superintendent of the extraction plant at the division's soybean processing plant in Belmond, Iowa, and John F. Flynn will serve as Belmond office manager and traffic manager.

Hernan Frias, chief of the division of statistics and information in the Division of Agriculture, Chile, is spending several months in Illinois studying the extension service of the U. S. Department of Agriculture. He is especially interested in hybrid corn, soybeans, fertilizers, farm management, and the sunflower harvest in Piatt County.

Over 250 feed men and women attended the annual Iowa feed school and postwar conference sponsored by the Western Grain & Feed Association and the Feed Institute of Iowa at Des Moines September 25, when the latest knowledge of animal nutrition and problems of reconversion were thoroughly aired.

Courtney Lawyer, 42, president of the North Iowa Cooperative Processing Co., at Manley, Iowa, was gored to death by a bull September 30. The fatal accident occurred just before the formal opening of the cooperative's new soybean processing plant.

E. L. Dutcher, Swift & Co. Soybean Mill, Des Moines, and former secretary of the Des Moines Feed, Flour, Seed and Grain Club, was moved up to the presidency of that association at the annual meeting held September 5th at Des Moines.

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Further Advances in Yield Prospects

The U. S. Crop reporting board estimates the national soybean crop at 185,100,000 bushels, as of October 1. This is up 694,600 bushels over the September estimate and 98.8 percent of the crop harvested in 1943. The estimated yield per acre is 17.4 compared with 16.8 a month earlier.

Little frost was reported by October 1 and the great bulk of the crop appeared to be out of danger. Reports on first beans combined indicated that most were coming into processing plants rather clean and with moisture content ranging from 10.5 to 14 percent. An Illinois report is that 96 percent are grading No. 2 or better, with test weight of 56.39 compared to 56.87 last year, and average moisture 12.38 percent. Iowa reports are that first of the crop to come in was clean with moisture content of 12 to 14 percent. Indiana reports beans clean and of excellent quality. First ones combined tested 11 percent moisture, and later ones 13 to 14 percent. These reports, however, were made on portions of the crop harvested before a week of rather general rain in the Midwest.

Insect damage is being reported from some localities. October 1 reports of *Soybean Digest* correspondents follow:

ALABAMA

Ben F. Alvord, Department of Agricultural Economics, Auburn: Only early varieties harvested. Harvesting prospects normal, yield slightly below normal. No caterpillar damage in south; considerable drought damage in northeast.

ARKANSAS

Charles F. Simmons, Agronomist, Little Rock: No frost damage will occur after Nov. 1. Considerable early drought damage. Beans will grade No. 1 and 2. Most beans will be harvested. Harvesting prospects good if labor conditions permit. Yield about normal, better than earlier estimates. Little farm storage, most of crop will move as harvested.

Jacob Hartz, Stuttgart, for east central: All crop mature. Yield 25% above earlier estimates. Harvesting prospects good. Plenty of rain in last 30 days has permitted beans to fill out in nice shape and assures one of best per acre yields we have ever had. Acreage down 20% from last year.

CONNECTICUT

J. S. Owens, University of Connecticut, Storrs: 100% of crop for hay. Yield 1 ton per acre, 50% normal. Acreage larger than 1943.

ILLINOIS

A. J. Surratt, Agricultural Statistician, Springfield: Weather increasingly rainy and cloudy from Sept. 20 to Oct. 3, particularly across central Illinois. Temperatures ranged from warm to mostly cool without frost. Maturing of soybeans further slowed and now 10 days late. Combining largely at a standstill for a week. About 80% of crop safe from frost and 5% combined on September 30, against 10% completed a year ago. 90% expected safe by Oct. 10. Due to continued growth of green weeds and grass, combining of numerous fields will await a killing frost as well as drier weather. Quality outlook average and yield per acre should fully hold up to September 1st prospect—barring later climatic damage. Dry weather needed generally to hasten maturity and condition crop for combining, marketing, and safe storage.

Russell S. Davis, Clayton, for west central: Bulk of crop safe from anything but hard freeze. Looks like moisture will be governing factor on grade. 11 to 14% moisture. Yield of first fields fully up to expectations. Very light oat and wheat crops should leave plenty of farm storage. 2 inches of rain each week for past 3 weeks has slowed up maturity a little and made fields soft. Illini, Lincoln, Mukden, Richland have all lost leaves. Chief, Viking have lost half of leaves. Need 3 weeks dry weather to complete harvest.

A. E. Staley Mfg. Co., Decatur, Ill., for central: 80% crop matured, no frost to date. Liberal amount of drought damage, some insect damage. Little harvesting except early varieties. Harvesting prospects not good. Fields too wet for past 10 days. Yields about as earlier estimates. Early varieties about 5 bu. under normal. Adequate storage available unless beans have to be harvested wet.

Frank S. Garwood & Sons, Stonington, for south central: 90% out of danger. Drought materially reduced yield responsible for late sown beans. Beans should grade mostly No. 2, if rains of past week not damaging. Wet weather may cause some loss from shattering and slight damage to top pods. Harvesting prospects appear good. Yield less than earlier estimates, about 70-75% normal, 18 bu. average. Should be no market problem as this area close to many large processors. Each year shows progressive increase in both insect and disease damage.

Gilbert F. Smith, Taylorville, for Christian County and east central: No frost yet. Rain helped late planted beans. 5% crop harvested. Beans will grade No. 2 if farmers will let them get low in moisture. Yield 3 to 5 bu. less than last year. If Indian summer follows wet spell lots of beans will be harvested. Shortage of extra qualified operators of tractors and combines which would speed harvest. Many farm women will drive trucks hauling beans.

IOWA

Maurice O'Reilly, State AAA, Des Moines: 90% crop matured before kill-

WHEN SURPLUS DISPOSAL HITS THE MARKET—

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- The service of at least one specialist in each commodity who understands the problems of your business.

Why not go into what we have to offer you in detail? It will involve no obligation on your part to consult an executive in our home office, 70 Pine Street, New York, or in an office nearer you, if you prefer. Write name and location and we will send you information as to how to reach the person most conveniently located.

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ing frost. Slight frost damage. Negligible damage by drought, disease or other conditions. Negligible percentage harvested. Beans will grade well if we have favorable harvesting weather, but prospects only fair. Yield 105% of earlier estimates. Adequate storage available.

Howard Roach, J. Roach's Sons, Inc., Plainfield, for northeast: 80% matured. No frost damage yet. Beans will grade 80% No. 2. None harvested. Harvesting prospects good. Adequate storage not available.

I. J. Johnson, Iowa State College, Ames: If frost late, crop will be good.

KANSAS

E. A. Cleavinger, extension division, Kansas State College, Manhattan, for eastern. No frost yet. 6 counties suffered slightly from drought late July to early August. Beans will grade mostly No. 2. 30% harvested. Frost in next 10 days would do some slight damage to late fields. Most fields and varieties maturing very rapidly. Harvesting prospects excellent. Yield 110% normal.

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MAIN OFFICES: MINNEAPOLIS, MINN.

Kansas Crop Report: Harvest in eastern Kansas started but delayed because of rain. Good yields expected.

MICHIGAN

A. A. Johnson, Farm Crops Department, Michigan State College, East Lansing: 95% crop matured. Very slight damage by frost. 10-15% acreage abandoned due to drought. 25-30% harvested. Harvesting prospects uncertain. Yield 5-10% below normal, 15-20% below earlier estimates.

MINNESOTA

W. G. Green, Lakefield, for southwest: No frost damage. 75% crop mature. Will grade No. 2 or better. Yield prospects about the same as earlier estimates.

MISSISSIPPI

James Hand, Jr., Rolling Fork, for Sharkey County: Drought prevented planting of much acreage and productivity of that which came up. Late rains caused much grass and weed growth. Much acreage plowed up or cut for hay. Harvesting prospects fair. Yield 60% normal.

MISSOURI

J. Ross Fleetwood, extension specialist, Columbia: 95% crop matured. Earlier than normal frost would cause some damage. Drought caused cutting of some beans for hay and decreased yields in some areas. Beans will grade good. 10% crop harvested. Harvesting prospects very good if weather o.k. Yield above normal, below last year.

Harry A. Plattner, Malta Bend: 90% matured before frost. Greatest damage by lodging. Beans will grade No. 2. Harvesting slow. Lodged beans green, others ripe. Uneven maturity and lodging will cause some damaged beans during harvest. Yield 80% normal.

NEBRASKA

Marr Soybean Processing Co., Fremont, for east: About 25% beans need 10 days before frost. A few new beans being harvested. Quality excellent. Yield average or slightly above.

NEW YORK

F. P. Bussell, Cornell University, Ithaca, for west: All crop matured. No frost damage. Drought injury in some localities. Beans should be sound with good harvest weather. Yields normal except where drought severe.

NORTH CAROLINA

J. A. Rigney, State College, Raleigh: Severe drought in September reduced yields materially in some areas. For first time in many years we were subjected to ravages of several insect pests. Fall army worm completely denuded a few acres in late Aug. Corn ear worm caused excessive damage all along coast. 10-15% will be cut for hay because no pods are left. Other fields should be cut but won't be because of labor shortage. Now there is a high infestation of velvet bean caterpillars that will wipe out all plantings put in after small grain or potatoes.

OHIO

D. F. Beard, Agronomy Department, Ohio State University: No killing frost yet except in isolated areas. 95 percent crop mature. Yield cut 25% by drought. 10-15% harvested. Many beans sold in September with 11-12% moisture. Harvesting can be completed by Oct. 30 with normal weather. Adequate storage available due to reduced crop. May be temporary shortage due to marketing flux.

W. G. Weigle, Van Wert, for northwest: Practically all mature. Damage by drought and weeds in early planted beans. Practically all beans of good quality. Moisture 10-12%. 40% crop harvested by Oct. 1. Beans mature and dry, plenty of combines to handle balance of crop in 2 weeks. Plenty of storage available if farmers will store on farm. Elevators have been getting more beans than can handle with bin capacity. Also, car shortage developing on railroads.

G. G. McIlroy, Irwin, for west central: No killing frost yet. Crop practically 100% beyond frost damage. Drought damage around 35%. Beans will grade okay up to present time. 5% harvested. Prospects good. Rowed beans on good farms normal yield in spite of drought. Beans sown solid showing terrific damage, sometimes more than 50%. Some Lincolns in this territory will go more than 40 bu. per acre. Harvesting of Lincoln commenced some days ago but to date no figures on known acreages.

D. G. Wing, Mechanicsburg, for central: No frost damage that I have seen. 50-60% drought damage. We have harvested beans down to 10-14% moisture. 5-10% harvested. Raining Oct. 2.

PENNSYLVANIA

L. H. Wiland, federal statistician, Harrisburg: Slight frost damage to both yield and quality in northern part Sept. 24. Yield reduced by drought during Aug. and early Sept. Beans will grade fair. Probably some delay in harvesting due to help shortage.

WEST VIRGINIA

R. J. Friant, extension agronomist, Morgantown: 10% drought damage. 95% crop harvested. Only 3,000 acres grown for seed out of total of 37,000 acres in West Vrginia. Yield 90% normal.

WISCONSIN

Geo. Briggs, Agricultural College, Madison: 90% crop matured. No frost damage. 20% drought damage. Drought in early July prevented good seed pod setting, therefore poor yields anticipated in some areas. Always some soys planted too late to mature. These used as hay or silage.

—s b d—

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACTS OF CONGRESS OF AUGUST 24, 1912, AND MARCH 3, 1933

Of The Soybean Digest, published monthly at Hudson, Iowa, for October 1, 1944.

State of Iowa } ss.
County of Blackhawk }

Before me, a notary public in and for the State and county aforesaid, personally appeared Jeanne M. Strayer, who, having been duly sworn according to law, deposes and says that she is the Business Manager of The Soybean Digest, and that the following is, to the best of her knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher: The American Soybean Association, Hudson, Iowa.

Editor: Geo. M. Strayer, Hudson, Iowa.

Managing Editor: Kent Pellett, Hudson, Iowa.

Business Manager: Jeanne M. Strayer, Hudson, Iowa.

2. That the owner is: The American Soybean Association, Hudson, Iowa.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

JEANNE M. STRAYER.

Sworn to and subscribed before me this 30th day of September, 1944.

ROBERT STEWART.

(My commission expires July 4, 1945.)

WASHINGTON DIGEST

By PORTER M. HEDGE
Washington Correspondent for
The Soybean Digest

Protein Supplies To War Food Administration officials the protein meal supply picture looks a good deal rosier.

Sizeable inventory stocks are on hand, livestock numbers are down from a year ago, and the oilseed crop has shown considerable improvement in the last 2 months.

A couple of months ago it looked as though this year's total tonnage of protein meal might be short around 900,000 tons from last year. Recent improvement in crop conditions now makes it appear that this year's tonnage may run only about 450,000 tons under last year, and possibly less.

The indicated drop in tonnage is more than offset, however, by reduction in livestock numbers, say WFA officials. The chick hatch up to July 1 this year was 19 percent under the year before, and War Food is asking that laying hens be culled 15 percent by January 1. Production of hogs, which consume sizeable quantities of meal, has been trimmed 28 percent from a year ago.

Pellet manufacture was stepped up this summer, but processors have been pinched for labor and haven't been able to run at capacity. WFA estimates pellet manufacture has been running about 60 percent of capacity for this reason.

Officials estimate that for the first time Midwestern soybean processing plants have enough capacity to process the bulk of the crop in that area. As a result of this increased processing capacity in the Midwest, comparatively few soybeans are expected to be shipped south by Commodity Credit Corporation for crushing, as was done last year.

Walter C. Berger, head of WFA's feed and livestock branch, doubts if any beans will be shipped into the southeastern area, but thinks a few will go into the southwest, to the Pacific coast, and to a few plants in the northeast which have been processing beans in recent years.

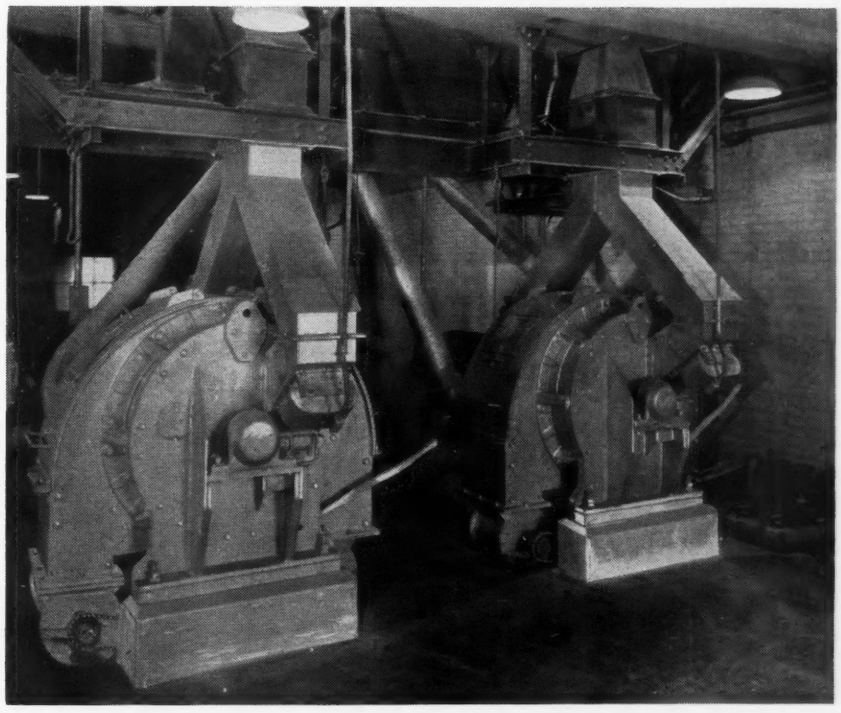
St. Lawrence Waterway Midwest soybean growers concerned with export markets may want to keep an eye on the smoldering St. Lawrence seaway controversey, expected to burst into flame when Congress reconvenes after the election.

When the Congressional recess ends, the Senate will be asked to approve an agreement between the United States and Canada providing for construction of the St. Lawrence seaway—and the request is sure to meet stiff opposition.

The seaway, first proposed in 1932, would afford a navigation route for sea-going vessels from Duluth, Chicago and other Great Lakes ports to the Atlantic ocean by way of the St. Lawrence River.

Backers of the seaway claim it would provide a cheap export outlet for Midwestern farm commodities, including export soybeans. Soybeans would enter the contro-

AT ARCHER-DANIELS-MIDLAND, PRATER DUAL FEED, DUAL SCREEN PULVERIZERS, PROCESS TO CLOSE SPECIFICATIONS FOR UNIFORMITY OF FINE GRANULATION...



Archer-Daniels-Midland sets high standards for fine granulation and uniformity of product. After exhaustive tests Prater Dual Feed Dual Screen Pulverizers were chosen to reproduce these standards at the Decatur, Illinois, plant. Illustrated above are two of a battery of four Prater Dual Feed Dual Screen Pulverizers, that working in tandem, uniformly produce the fine granulation and uniformity that marks Archer-Daniels-Midland products.

Archer-Daniels-Midland use Prater Dual Screen Pulverizers for both solvent and expeller processes, for both soybean and linseed materials. These Pulverizers are installed in Buffalo, Minneapolis, and Decatur plants of the company.

Grinding to specification and test are important factors in Prater Service to the Process Industries.

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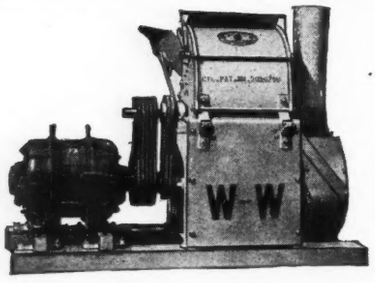
versy prominently if postwar exports follow the upward trend which set in before the war. Soybean exports jumped 295.6 percent in 1939 over the previous year, according to U. S. Department of Commerce figures—314,000 tons in 1939 compared with 79,338 the year previous.

The Department estimates that nearly 300,000 tons of total 1939 soybean exports moved out of Chicago. They went mainly to northern Europe—Belgium, Finland, Denmark, The Netherlands, Sweden, Norway and the United Kingdom. Germany was a prewar customer for United States soybeans, and might be again.

The Department of Commerce estimates a saving of $154,000 on the 1939 tonnage would have resulted from a 16-cent seaway rate through the St. Lawrence.



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DEPT. SB WICHITA, KANSAS

Oil Meal Priority

The soybean oil meal grower priority plan which *The Digest* first reported 2 months ago is now in effect in 14 Midwestern and Eastern states.

The plan, made public Sept. 29, permits soybean growers who feed livestock to obtain soybean oil meal under a priority system if they are unable to get it from regular trade sources. Here is the way it works:

First, in order to obtain a certificate for soybean oil meal, a grower must declare that he is unable to buy meal from his dealer.

Second, the grower must market his beans.

Third, he is eligible only for the amount of oil meal that can be processed from soybeans he grew and sold, or for enough to meet his minimum livestock feeding requirements, whichever is smaller.

Fourth, he can purchase only a 30-day supply, with certain exceptions.

"Priority" meal will come out of the 20 percent of processing capacity set aside each month for government-directed distribution.

The priority system will operate in Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Nebraska, Ohio, South Dakota, Wisconsin, Kansas, New York, New Jersey, Pennsylvania, "and any other states recommended by the state (AAA) committee and approved by the regional director."

County AAA committees will handle applications and issue certificates good for meal at local dealers. Dealers will be able to use receipted certificates to replenish stocks from set aside meal.

Soybean Goals

Official thinking on acreage goals for vegetable oil crops next year hasn't completely "j e l l e d," but it's leaning heavily in the direction of comparatively high acreages for 1945.

Food allocations officials, who must think in terms of domestic, military, and export requirements, expect fats and oils to be "tight" for at least another year. Beyond that, they don't make estimates, even off the record.

But it's now indicated that War Food Administration will ask for around 11 million acres of soybeans next year. This would be only 312,000 acres short of 1944 plantings.

All told, 1945 crop goals are expected to total about the same acreage as last year, though there will be sizeable shifts within the total. Tentative goals will be completed by the middle of November, sent to the states for recommendations, and later adjusted.

A flaxseed production in 1945 of around 40 million bushels is wanted by War Food officials. They had hoped to import about half this amount from Argentina, but the State Department ban on U. S. ships loading Argentine cargoes may prevent this.

Oil Meal Ceiling

A separate price ceiling of $45 a ton for soybean oil meal containing 44 percent protein and produced exclusively by the extraction method went into effect this month.

In issuing the new regulation OPA made no change from the past season in the price ceilings, but included a 44 percent protein guarantee for oil meal produced by the extraction method.

The price ceiling of 41 percent protein content soybean oil meal produced by other methods remained unchanged from last season at $45 a ton.

A specific price ceiling of $30 a ton, Decatur, for the first time was established for soybean millfeed containing 15 percent protein. Previously, it had come under the general price regulation. The $30 figure compares with a ceiling of $36.50 a ton, Missouri River base points, for wheat millfeeds containing around 16 percent protein.

Effective October 2, the new action "will not interfere with the trading rules established by the National Soybean Processors Association as to quality of soybean oil meal," OPA declared.

—s b d—

APPRECIATION

The Silver Jubilee Conference is past history so far as time and place is concerned. The Anniversary issue of the Soybean Digest has brought to you in record time the complete details of the conference. Are we proud of the *Soybean Digest* and those who have made it possible? Yes, this from every reader. Edward J. Dies, President of the National Soybean Processors Association, has certainly spoken for all members in these words: "The Silver Jubilee issue is a beaut. It is packed with information that alone provides an education in soybeans."

A letter from a man associated with one of the large processors may have expressed the story of the past years' efforts and we quote, "If I had to express the outstanding achievement of your association in the last year, I would be inclined to say it was that the understanding between processors and growers had been strongly developed. It has always been my belief that our interests were the same, and the creation of this healthy atmosphere should benefit both."

"There is no end to the good that can be done in the world, if we didn't care who got the credit." Taking this as the criterion of the Association's past work, I take this opportunity to express the appreciation of the American Soybean Association to one and all who made possible the success of the Silver Jubilee Conference.

To our genial host, College of Agriculture, University of Illinois, assisted by the Regional Laboratory, U. S. D. A., agricultural colleges of other states, Illinois Crop Improvement Association, farm equipment companies, Illinois Farm Managers Association, Illinois Farm Bureaus, Chamber of Commerce and Association of Commerce working with the hotels and merchants of Champaign-Urbana. Do you know how more valuable information could have been presented in two days?

To the Exhibit Committee selected from the soybean processing industry for an educational exhibit that was a masterpiece. Thanks to these men for their untiring efforts in presenting an exhibit that represented 25 years of progress.

To the Nomination Committee for their selection of men to carry on with the great task ahead in the soybean industry. Men of ability, sound of judgment and sincere of purpose. Also the Resolutions Committee in the presentation of a safe, sound and constructive approach to the problems ahead.

To the press and radio for unlimited space and time in carrying the message to the public. Their work was most commendable. Lest some person or group might be overlooked permit me to say, from each of us to all of you, we extend our sincere appreciation.

Sincerely yours,
J. E. JOHNSON,
Retiring President,
American Soybean Association.

IN THE MARKETS

• **JULY FOOD PURCHASES.** WFA's report of agricultural commodities purchased during July for lend-lease, territorial emergency, Red Cross and other purposes.

Meat, dairy and poultry products head the list of foods for the Allies, in the War Food Administration's report of July deliveries for shipment under lend-lease. These deliveries totaled 522,851,964 pounds compared with 658,116,418 pounds in June and 1,231,844,656 pounds in July of last year.

COMMODITY	July	QUANTITY LBS. JANUARY 1, TO JULY 31, 1944
Margarine	1,710,000	70,052,883
Shortening		3,163,872
Linseed Oil, Edible	17,000,000	170,990,253
Soybean Oil	38,614,626	53,654,625
Tomato Soya Soup		1,792,000
Soybean Meal		6,880,000
Soybeans	10,000,000	10,000,000
Soy Flour		1,000,000

	August	Jan. 1, thru Aug. 31, 1944
Margarine		70,761,883
Shortening		3,344,872
Soybean Oil	47,320,000	101,904,625
Soybean Oil Meal	2,780,000	9,660,000
Soybeans		10,000,000
Soy Flour		1,000,000

• **VEGETABLE OIL DELIVERIES.** The War Food Administration has amended War Food Order No. 29, continuing through December 31, 1944, the suspension of restrictions on delivery of crude cottonseed, peanut, soybean and corn oils to refiners for refining purposes. The suspension began on October 1, 1943.

Authorizations for delivery of the four crude oils to all users (except refiners) will continue to be obtained from the Office of Distribution, and there are no changes in provisions of the order which require authorization for use of the four oils, and for delivery and receipt of refined grades.

Allocations will be made in September for October, November and December use and deliveries. Applications should be mailed by September 10 to the Fats and Oils Branch, Office of Distribution, War Food Administration, Washington 25, D. C.

• **SOYBEAN INSPECTIONS.** Inspections of receipts of soybeans dropped sharply in August to a total of 889 cars compared with 2,052 cars in July, according to inspectors' reports to the War Food Administration. Inspected receipts October through August this season were 81,805 cars compared with 73,255 cars for the same period last season.

The quality of soybeans inspected in August was slightly higher than for the preceding month, 89 percent grading No. 2 or better compared with 87 percent in July. Eighty-seven percent graded No. 2 or better October through August this season compared with 31 percent for the corresponding months last year. Only 1 percent fell in Sample grade compared with 39 percent last season.

Inspections of soybeans in August include truck receipts equivalent to about 14 cars.

• **STOCKS.** War Food Administration report of soybean stocks in commercial storage.

	1943	1944
Sept. 13, bus.	927,000	1,600,793
Sept. 19	835,000	1,414,486
Sept. 26	785,000	1,467,599
Oct. 3	732,000	1,322,091

Approximately 62.6% of the available commercial storage was filled Oct. 1 compared with 60.8% Sept. 1 and 61.2% Oct. 1, 1943.

• **STANDARD SHORTENING SHIPMENTS.** By members of Institute of Shortening Mfgrs., Inc.

Week ending Sept. 9, lbs.	7,945,239
Week ending Sept. 16	10,010,044
Week ending Sept. 23	10,063,402
Week ending Sept. 30	11,319,590

GOVERNMENT ORDERS

• **CERTIFICATION OF 1944 CROP SOYBEANS.** R. T. Miles, in charge general field headquarters Grain Products Branch of War Food Administration, reports: The Commodity Credit Corporation in its "Soybean Loans and Purchase Program—1944 Crop" provides for separate discounts for each factor on which the inspected lot of soybeans fails to meet the qualifications of the grade No. 2 Yellow or No. 2 Green Soybeans. To assist the Corporation and the trade in the application of discounts, grain supervisors and licensed inspectors will, upon request by properly interested parties, show on the certificate of grade, under remarks, the actual determination of such grading factors.

In addition to the above, the following instructions will apply to the specific grading factors mentioned:

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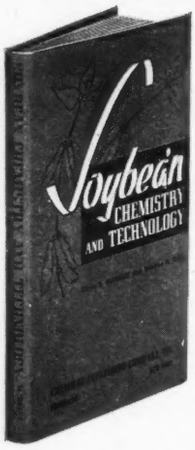

Soybean Chemistry and Technology . . .

by KLARE S. MARKLEY

Principal Chemist, Southern Regional Research Laboratory; Formerly Senior Chemist, U. S. Regional Soybean Industrial Products Laboratory

and WARREN H. GOSS

Senior Chemical Engineer, Northern Regional Research Laboratory; Formerly Senior Chemical Engineer, U. S. Regional Soybean Industrial Products Laboratory.

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Here is a timely book to meet the tremendous demand for up-to-date facts covering the chemical and technical aspects of the versatile oriental soybean. The clarity and thoroughness with which it is written reflects the authors' wide knowledge, broad perspective and infinite patience for detail.

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The machinery and equipment of soybean processing industries are described and illustrated in detail. A comprehensive list of soybean oil mills and manufacturers of equipment is also given. This is a "must" book for all those engaged in soybean production.

CONTENTS: Composition and Properties; Mineral Constituents; Proteins and Other Nitrogenous Constituents; Enzymes; Carbohydrates; Glycosides; Pigments; Vitamins; Oil and Oil-Soluble Constituents; Processing Soybeans; Production and Refining Phosphatides; Processing Soybean Oil for Food Uses; Literature Cited.

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Foreign Material—Show the percentage of foreign material in all cases where the percentage of assessed dockage plus the actual percentage of foreign material exceeds 2 percent.

Mixed Soybeans—Show percentage of each class in soybeans which grade Mixed Soybeans.

Moisture Content—In order to assist the Corporation and the trade in the application of premiums for soybeans, show the percentage of moisture in those cases where the moisture content is 11 percent or more.

Supervisors will provide copies of this memorandum to licensed inspectors within their respective districts and should assist the licensees in giving effect to the procedure provided for herein.

• **OIL MEAL CEILING.** A ceiling price for soybean oil meal of a standard protein content of 44 per cent and produced exclusively by the "extraction method" is announced by the Office of Price Administration.

The action was taken in a revision of the soybean oil meal regulation (Maximum Price Regulation No. 443).

The price of soybean oil meal of a protein content of 41 percent, and produced by any other method than the "extraction method," or by any other combination of methods, remains unchanged.

A price also is established for soybean by-products (soybean mill feed) on a basis of 15 percent protein content. This is a new product resulting from the production of soybean flour for human consumption. No specific price had previously existed for this product.

As formerly, all prices in today's action are f.o.b. Decatur, Illinois. They are as follows:

"Extraction method" meal ..... 44% protein—$45 per ton
Other types .....41% protein—$45 per ton
Soybean by-products .....15% protein—$30 per ton

The above prices are on a bulk basis with the former premiums for cake and pellets, containers and less-than-carload-lot deliveries, freight and transportation, continued as before.

Specific pricing methods are established for sales of soybean products of a guaranteed protein content lower than the minimum requirements. Reductions in the price must be made on the basis of each one-half unit of protein below the required minimum.

The action also establishes a method for adjusting prices between buyers and sellers for deliveries of soybean products that are below the guaranteed protein minimum. These adjustments are based on the shortage of protein in the delivered product.

This supplement will not interfere with the trading rules established by the National Soybean Processors Association as to quality of soybean oil meal, OPA said. The industry Advisory Committee was consulted on all provisions in the regulation.

No increase in prices will result to consumers of soybean products or by-products. A trade bulletin to assist the industry has been prepared and will be available at all District OPA offices shortly.

• **OPA RULING ON SIEVES.** The Office of Price Administration now specifies that certain size sieves must be used in making dockage tests on alfalfa, medium and mammoth red clover, alsike clover, white blossom sweet clover, yellow blossom sweet clover, and timothy.

The following is the official table of screen combinations to use in grading the above type of seeds:

SEED	COMBINATION OF SCREEN SIZES		
	Top	Middle	Bottom
Alfalfa	4 x 18″ or 3/64″ x 5/16″	1/14″	4x24
Med. & Mam. Red Clover	4 x 18″ or 3/64″ x 5/16″	1/15″	6x24
Alsike Clover	1/18″		6x32
White Blossom Sweet Clover	4 x 18″ or 3/64″ x 5/16″	1/15″	6x24
Yellow Blossom Sweet Clover	4 x 18″ or 3/64″ x 5/16″	1/15″	4x26
Timothy	1/25″		6x34

Most commonly used by the seed trade are the 9x9″ sieves with wooden frames telescoping. These sieves are available for prompt shipment.

• **1943 SOYBEAN CROP.** The soybean regulation covering the 1943 crop has been clarified in several respects for the purpose of effective price control, the Office of Price Administration announces.

This action, effective September 19, 1944, clarifies the merchandising mark-ups permitted. It provides a maximum mark-up on sales by purchasers other than producers, trucker merchants or country shippers.

The mark-up, that formerly was 1½-cents has been reduced to one-cent, to prevent brokers from also acting as merchandisers. Crushers of soybeans were found to be penalized by the additional one-half-cent when buying from brokers who sold as merchandisers, OPA said.

The definitions of "storage facilities" and "country storage facilities" has been added to the regulation. In addition, a definition of a "country shipper" has been amended to conform to the above definitions.

• **ALLOCATION OF EDIBLE OILS.** The War Food Administration has authorized the use of 11,273 tank cars (60,000-pound capacity) of edible oils—cottonseed, peanut, soybean and corn—by refiners and shortening and margarine manufacturers during October. November and December.

The new quarterly allocation includes 4,985 tank cars of cottonseed oil; 521 tank cars of peanut oil; 4,825 tank cars of soybean oil; and 942 tank cars of corn oil. Their use is divided as follows: (1) For the manufacture of edible finished products for civilian use under quotas prescribed in War Food Order No. 42—10,505 tank cars; (2) for the Army, Navy, Marine Corps, War Shipping Administration, Allies and WFA purchases—599 tank cars; (3) for industrial users—169 tank cars.